

Appendix I. Sources of asset information

Asset	Information required	Information details	Links
Birds	Bird species lists	Birds Australia or the DSE Atlas of Victorian Wildlife	http://www.birddata.com.au/home_top.html http://www.viridans.com.au
Fish & economic fish	Fish species lists	DSE Atlas of Victorian Wildlife	http://www.viridans.com.au
Birds & fish	Conservation status of fish and birds	Advisory list of rare and threatened vertebrate fauna in Victoria 2003	http://www.dpi.vic.gov.au/CA256F310024B628/0/58D93F149297811DCA25710D0024AADE/\$File/Advisory+List+of+Threatened+Vertebrate+Fauna+in+Victoria+-+2003.pdf
Ecological Vegetation Classes (EVC)	Map of EVCs adjacent to estuary	Department of Primary Industries website - Victoria Resources Online. A Biodiversity Interactive Map on the website allows users to display a number of vegetation themes for any area of Victoria - including Ecological Vegetation Classes (EVCs), 1750 EVCs, broad EVC Groups and Bioregional Conservation Status of EVCs. The scale at which data is represented varies across the state and further surveys may be required on some estuaries. If further detail is required, mapping of EVCs at a scale of 1:10 000 is recommended	http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/vegetation
Rare and threatened flora	Conservation status of plants	Advisory list of rare and threatened plants in Victoria 2005	http://www.dse.vic.gov.au/dse/nrenpa.nsf/LinkView/996B0477753A4204CA256DD4007F1CA528E305DE442CAC684A256DEA0024ACF6



Asset	Information required	Information details	Links
Roads/bridges	Road classification	For arterial roads see 'maps of declared roads' at Vic Roads. Local road classifications are available from the local municipal council's Register of Public Roads	http://www.vicroads.vic.gov.au/vrne/vrne5nav.nsf/childdocs/-2BBDC9EF1E56C40ACA256FD300241C3B-DC01E44F4F8C5427CA256FD300241C40-A1FA773045A99B72CA256FE10042AAEE?open
Agricultural land	Property boundaries	See 'Agricultural Land Impact Assessment Report'. Cadastral property maps are available through the DSE Corporate Geospatial Database Library	http://www.nre.vic.gov.au/land/lcnlc2.nsf/FID/-9A2C348B40DC89BC4A256CB700181D8B?OpenDocument
Stormwater	Location and size of stormwater pipes	The internal diameter of stormwater pipes that discharge to estuaries is available from local municipal councils	
Cultural heritage	Important sites	Victorian Heritage Register & Victorian Heritage Inventory. Also contact local municipal councils	http://www.heritage.vic.gov.au
Indigenous culture	Important sites	Contact details are available at Aboriginal Affairs Victoria	http://www.dvc.vic.gov.au/AAV/INDEX.HTM
Freshwater flow	Minimum freshwater inflow	Minimum river discharge required for an effective artificial river mouth opening can be determined using historical data. Victorian river discharge data is available at the Victorian Water Resources Data Warehouse.	http://www.vicwaterdata.net/vic/waterdata/home.aspx
Identify dates of major social events	Important dates	Identify any dates that will potentially affect the threat score assigned for opening or not opening the estuary	



Appendix J. Assets and critical levels (Australian height datum) required for assigning threat scores

Asset title	Details <i>Insert information to identify asset</i>	Critical AHD	AHD
EVC		Coastal saltmarsh: Lowest AHD Estuarine wetland: mid point AHD Estuarine reedbed: mid point AHD Swamp scrub: Lowest AHD Littoral rainforest: AHD 30 cm below surface of EVC Warm temperate rainforest: AHD 30 cm below surface of EVC	
Rare and threatened flora		Refer to corresponding EVC	
Agricultural land		Low land Intermediate land High land	
Boat ramps		Access affected by inundation Some problems associated with use of ramp Boat ramp unusable	
Built infrastructure		More than 50 mm above property grounds Level of the underside of the floor of the house or commercial / industrial building 100 – 300mm above the floor level of the building More than 300mm above the floor level of the building	
Camping		Some loss of camping sites due to inundation of access tracks Some loss of camping sites due to inundation of sites Substantial loss of camping sites due to inundation of access tracks Substantial loss of camping sites due to inundation of sites	



Asset title	Details <i>Insert information to identify asset</i>	Critical AHD	AHD
Jetties		Access to jetty Jetty surface	
Recreational land		Some loss of recreational land due to inundation of access tracks Some inundation of recreational land Substantial loss of recreational land due to inundation of access tracks Substantial inundation of recreational land	
Roads and bridges		Less than 10 mm water over road or bridge 10-50 mm water over road or bridge 51-300 mm water over road or bridge Greater than 300 mm water over road or bridge	
Septic Systems		Top of septic tank Bottom of septic tank	
Stormwater		Greater than 50 mm above property grounds Level of the underside of the floor of the house or commercial / industrial building 100 – 300 mm above the floor level of the building Greater than 300 mm above the floor level of the building	
Walking tracks and bridges		Access to track affected by inundation Inundation causes some problems with use of track Track unusable	



Appendix K. The EEMSS Agricultural Land Impact Assessment Report

Property Identification

Name:

Property Location:

Property ID (Cadastral No):

Property Description

Predominant Agricultural Use 1 2 3 4 5 *Select one*

refer to 'Predominant Agricultural Use Categories'

Exceptions to single asset category land use. This section is only to be completed if the property cannot be categorised using the agricultural use descriptions provided. Please provide a description, an estimated score and a brief justification for the score assigned.

Description:

Score:

Rationale for score:

Other relevant land details

Only complete this section if the landholder has access to other non-adjointed land or leased adjointed land – Describe association to property affected by inundation. Include information such as proximity, accessibility and how land use is relevant to the property, in particular, how the land assists the landowner to mitigate loss associated with land inundation.

Land Types

Include all land utilised as part of the farming enterprise when completing the table below

Land type #	Area(ha)	Percentage	Estuarine water level (EWL)(m)
High land			>
Intermediate land			Between &
Low land			<

#Refer to 'Land Type Descriptions'



Monthly threat assessment

Refer to 'Threat Attributes and Scores'.

The total threat score is the maximum of the individual threat scores assigned to each attribute

		Threat Attributes –					Comments
Month	EWL metres	1. % of low & intermediate land inundated	2.Capability to mitigate loss	3. Degree of restoration required	4. Loss of access to higher land	Total threat score*	
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							



Predominant agricultural use categories

Category 1 – Non-agricultural land

Category 2 – Dryland grazing/non irrigated pasture/forestry

These enterprises have low level use of the affected asset areas for agricultural production. The land is part of a larger extensive grazing or forestry enterprise. If stock are grazed on the land it is for short periods of time during the year. The impact of inundation is minimal as the farm is run at a low stocking rate with significant alternative grazing options.

In general this asset will be in lower rainfall areas where pasture production is less than 4 tonnes of dry matter per hectare per annum. Paddocks used on the affected areas are large (greater than 20 ha).

Category 3 – High rainfall farming/lifestyle farming

These areas are subject to more intensive productive processes. This is achieved through the greater capacity to produce pasture (4-6 tonnes dry matter per hectare per annum) due to higher rainfall. As a result there is greater stocking pressure and less alternative grazing options. The enterprise would still be considered to be extensive grazing. Paddock sizes would be smaller (less than 20ha).

Lifestyle blocks may still be used for income generation but are not considered the primary source of income for the owners. They are also of smaller area (less than 10 ha). Generally use is for small numbers of production animals, horses or bush areas. Alternative grazing area may not exist and the use of hand feeding may be required during periods of inundation.

Category 4 – Mixed grazing – possibly some irrigation

These areas have significant income generation usage. Irrigated land in this category would be land that has occasional irrigation or is part of a larger area of irrigation that is not threatened with inundation. Mixed grazing areas would run at reasonably high stocking rates and a significant (greater than 10%) area of the farming enterprise is threatened by inundation. This area would be a higher rainfall area as in Category 3 above.

Category 5 – Dairy, orchard, vineyard, intensive agriculture or urban residential – possibly significant irrigation used

These areas are used for intensive agricultural pursuits. The areas affected will usually be greater than 10% of the total enterprise area. Grazing of dairy cows is at a high stocking rate (greater than 1.5 cows per hectare of the entire milking area). Orchard and vineyard use is part of a viable enterprise that is a significant part of the farm business. These enterprises have significant areas of effected land that is capable of being used for this enterprise. eg. dairy land that is capable of growing 6 tonnes of dry matter of pasture per hectare per year or potato farming capable of producing yields similar to that of unaffected areas in the same enterprise.



Land type descriptions

A percentage figure will be used for the loss of utilisation of the assets compared to not having any inundation for the period in question. This requires an assessment of the potential production from that area of land. Potential production will be greater on some areas of land than others. For the use in the threat value assessment land areas will be assigned one of three classifications:

1. **HIGH LAND** – Land that is not affected by inundation at all. This classification will be assigned to give an assessment of the proportion of the farming enterprise affected by inundation.
2. **INTERMEDIATE LAND** – Land that is only inundated for short periods of time. These are the higher areas that are the last areas inundated and the first to have the water recede. These areas will normally have a capability for production of pasture or crops. These areas of land will be the most affected by decisions in estuary management.
3. **LOW LAND** – These land areas will have minimal productivity due to constant inundation. These are areas that normally have minimal productive output and are only seen as opportunistic use areas. Plant species that survive in these areas are of minimal productive use.

Threat attributes and scores

Threat score	Threat level	Threat attributes
2	Minor	<ol style="list-style-type: none"> 1. Less than 50% of low land inundated 2. Loss can be mitigated with minimal extra inputs – eg stock can be moved to other land and no extra bought in feed is required 3. a) No renovation or extra input required to revert land to previous productivity following inundation. b) No damage to fences 4. No loss of access to other high land
3	Moderate	<ol style="list-style-type: none"> 1. All low land is inundated and less than 20% of marginal land is inundated 2. Mitigation of losses requires minimal extra inputs – eg stock can be moved to other land and less than 10% of feed requirements need to be bought in 3. a) Minimal input required to return land to previous productivity – eg weeds sprayed with no extra seed required. b) Debris to be removed to maintain fence integrity 4. Access is restricted to less than 5% of the rest of the farming land
4	Major	<ol style="list-style-type: none"> 1. All low land is inundated and 20-50% of intermediate land is inundated 2. Stock can be moved to non inundated land but feeding out is difficult 10-50% of feed requirements need to be brought in 3. a) Pasture renovation is achieved through drilling of appropriate seed b) Some fence rewiring required 4. Access to 5-10% of the rest of the enterprise is affected
5	Severe	<ol style="list-style-type: none"> 1. All low land inundated and greater than 50% of intermediate land inundated 2. No suitable land is available for hand feeding and greater than 50% of stock requirements need to be brought in 3. a) All land needs to be fully renovated with cultivation and lime or gypsum treatment to address soil quality issues. b) fences need to be replaced 4. Access is lost to greater than 20% of the farm area



Threat modifiers

Duration of inundation (DI)

The effect of duration of inundation on the use of a specific agricultural asset is related to the processes of waterlogging and salinity. The assessment assumes an inundation period of less than 21 days. For periods greater than 14 days, threat attribute scores will be increased by one.

If a period of other than 14 days is recommended please complete the table below.

Critical duration of inundation (days)	Threat modifier rationale
--	---------------------------

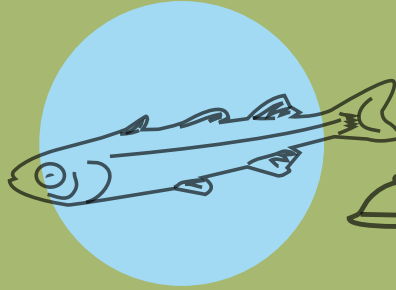
Drought (DR)

The extent of drought conditions will affect the productive capability of an asset. EEMSS will change the threat scores to reflect the increased level of threat associated with each level of drought

1. Local drought (100 km) – Causes a reduction in the productive capability of the entire farming enterprise. This will result in reduced capability to mitigate losses through decreased production of pasture from high unaffected land. Consequently increased amounts of brought in feed will be required. This will increase the threat value as assigned by one point.
2. Regional drought (1000 km) – A reduction in the supply of brought in feeds due to drought in the areas where these feeds are sourced will result in increased prices of these feeds. This will increase the threat value as assigned by 2 points
3. Continental drought (5000km) - Feed prices will be more severely affected by continental drought. The effect of a regional drought would be increased costs of transportation of feed from distant areas. Continental drought would result in feed prices being related to the cost of importation of feed from overseas. A continental drought will increase the assigned threat value by 3 points.

The EEMSS will add the threat modifier scores to the total threat score and will not have the capacity to add the modifier to the individual attribute scores. Therefore, if both modifiers are applicable, that is the property is experiencing drought and some land has been inundated for greater than the given period, both modifiers will be added to the threat score.







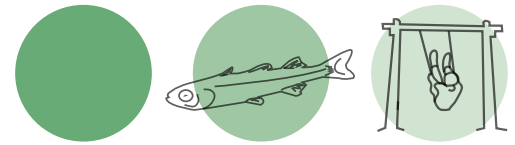
USER MANUAL



EEMSS

estuary entrance management support system

10 Installing the EEMSS on your computer



EEMSS Database is a Microsoft Access™ built application. The system has been custom designed and built. Users do not need Microsoft Access™ training, but will need to know how to use the EEMSS application.

Current version

Microsoft Access™ 2000
EEMSS_8.mdb

EEMSS can be accessed by Microsoft Access™ 2000 or higher. The user must only open the correct version of EEMSS, depending on which version of Microsoft Access™ they are using. If using Microsoft Access™ 2003 the user must convert the database to that version if they wish to make edits. If using Microsoft Access™ 2000, the user will not have to make any database conversions at all.

System requirements

For best use of the EEMSS Database Application, the user should have the following settings on their PC.

PCs using Windows 98, 2000, Me, XP or Windows NT® 4.0

Pentium® 11 MHz or faster processor

256 MB RAM minimum

The following settings can be adjusted via the control panel > display settings.

Display Settings 1024 x 768 pixels

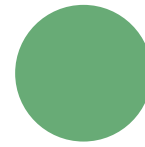
Colour Settings High Colour (16 bit) or True Colour (32 bit)

Loading the EEMSS onto your PC

To open the EEMSS database, insert the CD and then double click the EEMSS.mdb file as you would any Microsoft application such as Word or Excel.



11 Implementing the EEMSS



There are three major phases involved in implementing EEMSS as a decision making tool for a particular estuary:

Data acquisition & input phase

This involves:

- Identifying assets
- scoring environmental assets
- scoring threats to environmental assets

Information needs to be collected about all assets that are potentially impacted by the opening decision. Forms are provided in the EEMSS to guide collection of this data.

Community consultation phase

This is an essential step in the application of the EEMSS as it is the stage at which community acceptance and adoption of the EEMSS as a management tool is facilitated by the estuary manager. Direct community input to the EEMSS is required to:

- identify and score socio/economic and cultural assets
- identify and score the threats to those assets.

Decision phase

At the time of making an opening decision the manager is required to:

- input data on current estuary conditions
- assess the impact assessment and checklist reports
- communicate the decision and its rationale to the community.



11.1 Asset descriptions

Data acquisition

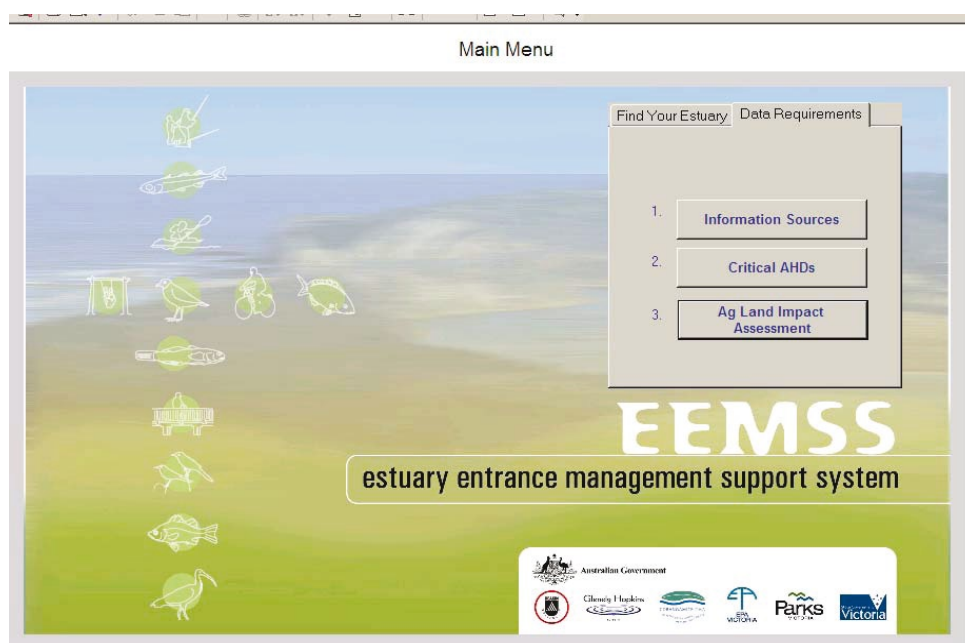
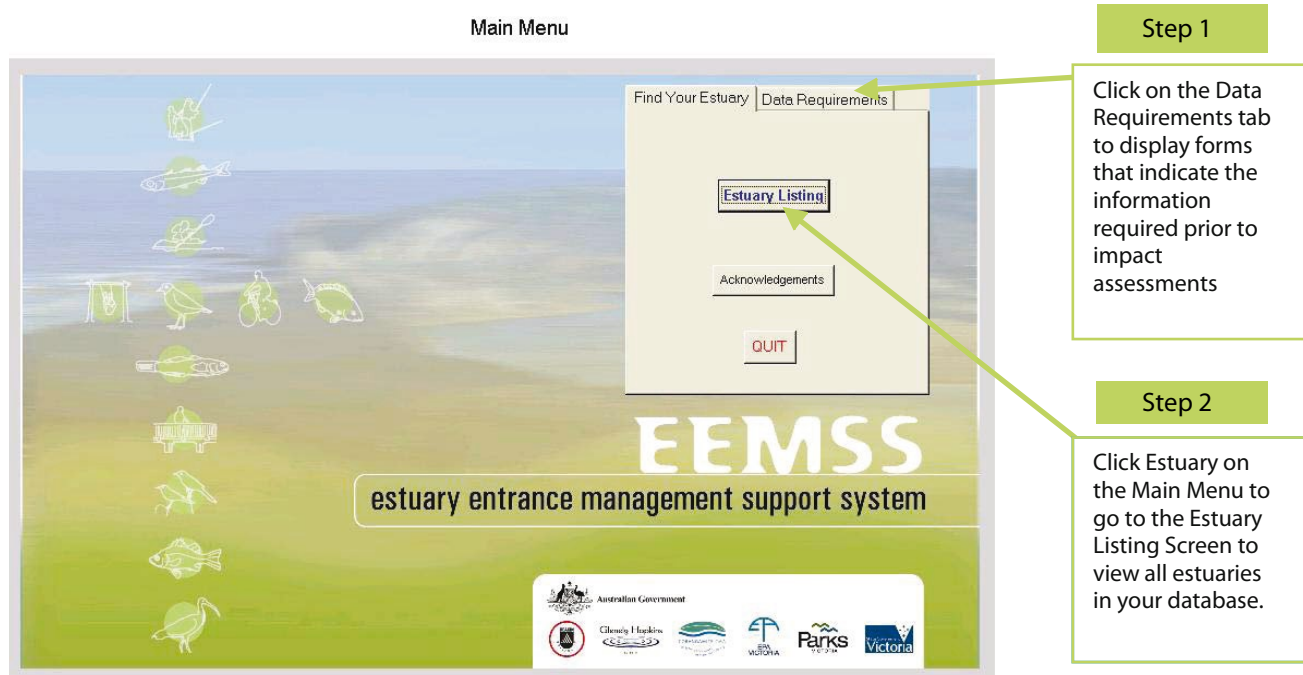
The following is a step by step guide to loading your estuary's asset information into EEMSS. This is done prior to community consultation. The more complete and up to date the data set entered into EEMSS the better the impact assessment report will reflect the true impact of the decision.

1. Identify assets on the estuary	<p>The 'Data requirements' sheet in the EEMSS includes three forms. Use these as a guide when collecting data for inclusion in the database. (see STEP 1).</p> <p>Use the 'Information sources' form (Appendix I) to compile a complete list of socioeconomic, cultural and environmental assets for inclusion in the description section of the EEMSS.</p>
2. Identify AHDs at which assets are impacted by raised water levels	<p>Complete 'Critical AHDs' form (Appendix J). If all relevant AHDs are known, this will ensure that assigning threat scores is a simple procedure to complete in the workshop. If all relevant AHDs are not known, then further work may be required to collect any missing data.</p>
3. Investigate solutions, other than artificially opening the estuary, to protect inundated assets	<p>This is an essential step. Inclusion of some assets in EEMSS may be required in the short term while options are investigated. Other solutions could include: floating jetties & boardwalks; realigning or raising road levels; moving septs or installation of sewerage systems; raising stormwater drain outlets or reticulating stormwater; and return of wetlands on flood affected land.</p>
4. Undertake flood impact assessments of agricultural land	<p>Assessment of the impact of flooding on agricultural land needs to be undertaken in consultation with the affected landholder. Landholders only need to participate if they want their property included on the Impact Assessment report (and therefore factored into the final decision to open or not open the estuary mouth). Use of an independent agronomist to do these assessments is recommended. An 'Agricultural land impact assessment proforma' (Appendix K) is provided by the system for this purpose. Asset and threat scores are assigned to each property affected by inundation. Property IDs are used to identify each property in the EEMSS. The consultant will need to be provided with aerial maps showing property boundaries and if possible contours indicating the extent of inundation at various EWLs. The scores assigned are strictly confidential. A fictitious property should be included for demonstration purposes in the workshop. See section 6.11</p>
5. Contact Cultural Heritage Officer	<p>The options for including Indigenous cultural values in the EEMSS should be presented to the Cultural Heritage Officer See section 5.1.</p>



Asset data input

Locate your estuary by selecting the 'estuary listing' button (Step 2). New estuaries can be included by adding a row to the bottom of the list. Relevant CMA details are added on the 'estuary management' sheet in the 'description' section.



Three files are provided to guide data collection.

ESTUARY LIST							Close			
OZESTUARY No	Estuary Name	CMA	Status	Estuarine Water Level EWL (m)	Date					
629	Aire River	Corangamite	Closed	3.5	1/01/2005	Status	Descriptions	Asset Scores	Thr Scores	
920	Anglesea	Corangamite	Artificially Opened	1.2	1/01/2005	Status	Descriptions	Asset Scores	Thr Scores	
930	Barham River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
630	Curdies Inlet	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
922	Erskine River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
634	Fitzroy River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
932	Gellibrand River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
636	Glenelg River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
631	Hopkins River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
927	Kennett River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
633	Lake Yambuk/ Eumerella River	Glenelg Hopkins	Artificially Opened	1.2	5/05/2000	Status	Descriptions	Asset Scores	Thr Scores	
602	Mallacoota Inlet	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
935	Merri River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
632	Moyne River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
921	Painkalac Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
609	Snowy River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
1034	Spring Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
635	Surry River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores	
607	Sydenham Inlet/Bemm River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
606	Tamboon Inlet	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
628	Thompsons Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores	
915	Thurra River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
918	Tidal River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
604	Warrumbidgee Inlet	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores	
TOTAL									27	

The Estuary List screen displays many Victorian estuaries. Estuaries can be added to the bottom of the list. The list can be sorted using any field. For example, to sort estuaries by CMA, click on a CMA in the list then right click and choose 'sort ascending'.

The most recent entry of mouth status, EWL and date is also displayed on this page (see Step 15).



Information about the environmental, socioeconomic and cultural assets of an estuary is stored in the 'description' section of the EEMSS.

Step 3

Click Descriptions Button to select the estuary descriptions section.

OZESTUARY No	Estuary Name	CMA	Status	Estuarine Water Level EWL (m)	Date	Status	Descriptions	Asset Scores	Thr Scores
629	Aire River	Corangamite	Closed	3.5	1/01/2005	Status	Descriptions	Asset Scores	Thr Scores
920	Anglesea	Corangamite	Artificially Opened	1.2	1/01/2005	Status	Descriptions	Asset Scores	Thr Scores
930	Barham River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
630	Curdies Inlet	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
922	Erskine River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
634	Fitzroy River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
932	Gellibrand River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
636	Glenelg River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
631	Hopkins River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
927	Kennett River	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
633	Lake Yambuk/ Eumerella River	Glenelg Hopkins	Artificially Opened	1.2	5/05/2000	Status	Descriptions	Asset Scores	Thr Scores
602	Mallacoota Inlet	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
935	Merrri River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
632	Moynie River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
921	Painkalac Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
609	Snowy River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
1034	Spring Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
635	Surry River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Thr Scores
607	Sydenham Inlet/Bemm River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
606	Tamboon Inlet	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
628	Thompsons Creek	Corangamite				Status	Descriptions	Asset Scores	Thr Scores
915	Thurra River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
918	Tidal River	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
604	Wingandetta	East Gippsland				Status	Descriptions	Asset Scores	Thr Scores
TOTAL									27

TIP

Click on the 'folder' icon to close section.

Asset Descriptions: Aire River

☒ Description
 ☒ Estuary Management
 ☒ EV
 ☒ Flora
 ☒ Birds
 ☒ Fish
 ☒ Fishing
 ☒ Roads+Bridges
 ☒ Jetties/Ramps
 ☒ Recreation
 ☒ Agr Land
 ☒ Stormwater+Septics
 ☒ Built Infrastructure
 ☒ Indigenous Culture
 ☒ Cultural Heritage
 maps photos Notes

Estuary Name: Aire River
Estuary No: 629

Government/ Policy

Heritage River: ☒ comments: A managing authority of a heritage river area must take all reasonable steps to ensure that the significant nature conservation, recreation, scenic or cultural heritage attributes of the area are protected.
 Directory Of Important Wetlands in Australia: ☒
 Ramsar: ☐

Wetlands

DSE wetland reference number	Wetland id	Wet_cat	Ref_no	Area (ha)	Wet_type	Criteria
7520142052	semi-permanent saline					
7520144020	permanent saline					
7520155045	semi-permanent saline					
7520149035	semi-permanent saline					

Step 4

Click tabs to enter separate screens for environmental, socioeconomic and cultural data.



Example 1. Input of EVC data

THE list of EVCs was determined by the technical advisory group. The critical EWL to enter is explained in the 'Critical AHD sheet

Asset Descriptions: Aire River

Description Estuary Management EVC Flora Birds Fish Fishing Roads+Bridges Utilities+Drainage Recreation Agr Land Stormwater+Septics Built Infrastructure Indigenous Culture Cultural Heritage maps photos Notes

EVC

EVC	Full Description	Regional Conservation Status	Source	EVC Study	Reference
Estuarine Wetland	Defining characteristic: Moderate height rush/sedge wetland vegetation, variously with component of small halophytic herbs, occurring on estuarine flats.				
Warm Temperate Rainforest	Defining characteristic: Closed forest to 25 m tall occurring along gullies and river flats. Dominated by a range of non-eucalypt canopy species above an understorey of smaller trees and shrubs and usually visually dominated by ferns and climbers.				
Swamp Scrub	Defining characteristic: Myrtaceous shrub species (usually) shared with Swamp Scrub occurring in association with ground-layer dominated by non-halophytic herbs.				
Coastal Saltmarsh	Defining characteristic: Low-lying salt-tolerant vegetation of inter-tidal zone, dominated by mangroves.				
Estuarine Reedbed	Defining characteristic: Vegetation dominated by tall, dense stands of reeds.				
*					

Critical Data

EVC	enter Critical EWL (m)
Coastal Saltmarsh	1
Estuarine Wetland	1.5
Estuarine Reedbed	2
Swamp Scrub	6
Warm temperate rainforest	1.3
*	

Step 5

Click down arrow on drop down box to select an EVC from the predefined list. User can add new records where they see the asterisk.

Step 7

Critical estuarine water level heights must be entered in this section. Refer to 'Critical AHD' form (Appendix G) for guidance

User selects the EVC as above and then enters EWL in metres in the field directly to the right.

TIPS

- User can view further information in the "Lookups" by clicking the magnifying glass wherever it appears. A screen appears with the "Lookup table" that can be viewed by the user.
- On the EVC page further information can be also be viewed by double clicking on a cell in the 'Full Description' column
- The user may add to the Lookup table by scrolling to the bottom of the screen and entering data besides the new record asterix. However, this list is pre-determined by the project team and should only be edited following careful consultation with the team.

EVC No	EVC	Description
10	Estuarine Wetland	Defining characteristic: Moderate height rush/sedge wetland vegetation, variously with component of small halophytic herbs, occurring on estuarine flats. Habitat: Anaerobic peat-rich mud of estuarine flats, inundation regimes variously sustained if drainage-line outlet blocked, twice daily with tides if breached.
13	Brackish Sedgeland	Defining characteristics: Sedgeland dominated by salt-tolerant sedges in association with low grassy / herbaceous ground-layer and a halophytic component. Habitat: Mostly at least marginal wetland (including peripheral or ephemeral zones). Floristics: Structurally prominent species include Gahnia filum / Gahnia trifida and Baumea juncea, with
140	Mangrove Shrubland	Defining characteristic: Extremely species-poor shrubland vegetation of inter-tidal zone, dominated by mangroves. Habitat: Mud-flats of the lower inter-tidal zone of sheltered embayments. In Victoria, confined to tidal wetland situations.
196	Seasonally Inundated Sub-saline Hermland	Defining characteristic: Species-poor low hermland of seasonal saline wetland, dominated by Wilsonia spp. Habitat: Seasonal wetland within relicts of former tidal lagoons. Salinity and water regimes fluctuate over wide range. Habitat is rarely inundated tidally and then only by diluted seawater, overland flows from the Barwon River are important.
32	Warm Temperate Rainforest	Defining characteristic: Closed forest to 25 m tall occurring along gullies and river flats. Dominated by a range of non-eucalypt canopy species above an understorey of smaller trees and shrubs and usually visually dominated by ferns and climbers. Floristics: Canopy usually dominated by Lilly Pilly Acmena smithii, Muttonwood Rapania howittiana and
53	Swamp Scrub	Defining characteristic: Myrtaceous shrub species (usually) shared with Swamp Scrub occurring in association with ground-layer dominated by non-halophytic herbs. Habitat: Essentially freshwater habitat, often on the outer verges of Estuarine Scrub and further upstream where freshwater inputs from the creek and from groundwater are sufficient to sustain non-halophytic

TIP

EVC lookup table displays all the EVC's available to select in the database.



Example 2. Input of recreational assets

Asset Descriptions: Aire River

Recreation

double click to zoom field

You must enter a name or description of the asset

Rec Type	You must enter a name or description of the asset	Contact Name (s)	Contact No(s)	Critical EWL (m)
Camping	claydy beach			
Camping	campers paradise			
Recreation Land	anglers oval			
Walking Tracks	anglers track			
Swimming	freds hollow			
Watercraft	canoe hire			

Step 8

Select relevant recreational assets. There can be multiple entries, e.g more than one walking track or camping area. It is therefore important to enter an identifying name for each. This will appear on the impact assessment report

Step 9

TIP

To delete an entry : Select asset then right click on mouse. Choose 'cut'. You will be asked to confirm you want to delete the record, select OK

Refer to 'Critical AHD' form (Appendix G).

- For the assets 'Agricultural land', 'Roads', 'Septics' and 'EVCs', it is critical that a single EWLs is entered in metres.
- Not all recreational assets require an EWL. For those assets that do, this information is used only to guide the threat assessment. Therefore, all the relevant information from Appendix B can be entered here or a summary, such as the range of water levels.



11.2 Assets scores

Once the data assets have been entered at the description phase, they are then scored. Please note that you cannot add new assets here. Only assets that you want to appear on the impact assessment report have to be scored. For further information about assigning asset and threat scores refer to Section 11.4 'Community consultation' and also relevant sections on each asset in Part 2 of the report.

ESTUARY LIST

Close

OZESTUARY No	Estuary Name	CMA	Status	Estuarine Water Level EWL (m)	Date	Status	Descriptions	Asset Scores	Threat Scores
629	Aire River	Corangamite	Closed	3.5	1/01/2005	Status	Descriptions	Asset Scores	Threat Scores
920	Anglesea	Corangamite	Artificially Opened	1.2	1/01/2005	Status	Descriptions	Asset Scores	Threat Scores
930	Barham River	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
630	Curdies Inlet	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
922	Erskine River	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
634	Fitzroy River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
932	Gellibrand River	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
636	Glenelg River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
631	Hopkins River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
927	Konnett River	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
633	Lake Yambuk/Eumerella River	Glenelg Hopkins	Artificially Opened	1.2	5/05/2000	Status	Descriptions	Asset Scores	Threat Scores
802	Mallacoota Inlet	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
935	Merri River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
632	Moyna River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
921	Painkalat Creek	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
609	Snowy River	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
1034	Spring Creek	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
635	Surry River	Glenelg Hopkins				Status	Descriptions	Asset Scores	Threat Scores
807	Sydenham Inlet/Bemm River	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
606	Tamboon Inlet	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
628	Thompsons Creek	Corangamite				Status	Descriptions	Asset Scores	Threat Scores
915	Thurra River	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
910	Tidal River	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
604	Warrumbidgee River	East Gippsland				Status	Descriptions	Asset Scores	Threat Scores
TOTAL									27

Step 8

Go to the Estuary List. Click on 'Asset Scores' Button.

Example 1. Assigning asset score to EVCs

Asset Scores: Aire River

☒ EVC
 ☐ Birds
 ☐ Flora
 ☐ Fish
 ☐ Fishing
 ☐ Roads
 ☐ Jetties/Ramps
 ☐ Recreation
 ☐ Agri Land
 ☐ Stormwater+Septics
 ☐ Infrastructure
 ☐ Human Health
 ☐ Indig Culture
 ☐ Cultural Heritage
 ☐ References

EVC

EVC	Regional Conservation Status	Source Date	EVC Study	Score
Estuarine Beaches				5
Estuarine Wetland				5
Coastal Saltmarsh				5
Swamp Scrub				5
Warm Temperate Rainforests				5

Step 9

Asset Scores screen appears. Simply click on each tab to go to desired asset. Then go to score field to enter scores

Note

Some scores like those for EVCs, birds, fish & roads are automatically entered for you and are set by the administrator.

